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PTO

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Attorney Docket No. 02762/LH

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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INVENTOR(S)		
Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)
David M.	STRAVITZ	New York, NY, U.S.A.

☐ Additional inventors are being named on the _____ separately numbered sheets attached hereto

TITLE OF THE INVENTION (500 characters max)

ALL PURPOSE POWDER DISPENSER

Direct all correspondence to: CORRESPONDENCE ADDRESS

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ENCLOSED APPLICATION PARTS (check all that apply)

☒ Specification Number of Pages 10
☒ Drawing(s) Number of Sheets 11
☐ Application Data Sheet. See 37 CFR 1.76
☐ CD(s), Number
☐ Other (specify)

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☒ No.
☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE _____ Date 01/06/03

TYPED or PRINTED NAME Leonard Holtz REGISTRATION NO. (if appropriate) 22,974

TELEPHONE (212) 319-4900 Docket Number: 02762/LH

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Attorney Docket No.: 02762/LH

ALL PURPOSE POWDER DISPENSER

This invention relates to a powder dispenser, and more particularly to a replaceable and/or a disposable cartridge module that functions in several areas, namely powder dispensing (baby and adult), deodorizing of used diapers & other disposables, (including garbage), disinfectant of potentially harmful and ordinary (viral & bacterial contaminants) and finally, for use as an all-purpose soap cleanser dispenser.

The invention is a self-contained capsule that administers a pre-determined amount of powder that is released by the combining of gravity and impact. The amount of powder is that is dispensed regulated by either fixed or variable openings in the cartridge module, and is released by the motion of hand tapping or the result of impact of one integral member against another, such as a lid closing on a container, i.e., a garbage pail with a hinged lid, or a closeable cover of a baby diaper and waste disposable pail.

One purpose of the present invention is to provide added protection against infestation and bacterial (common and hazardous) breeding in anything from home garbage cans to institutional applications such as that of garbage receptacles in doctors, surgeons, dentists, hospital, nursing homes and home bed care, to name just a few of the possible applications.

The cartridge module can be a small container (capsule) which can have a flange to allow it to slide-lock into a molded receptacle, or it may simply have a peel-off pressure sensitive adhesive thereon so as to be placed (stuck) in existing pails, etc.

As a powder dispenser (soap, baby powder, disinfectant, etc.) for use in non-pail applications, the module can be placed into or onto a wall mounted receptacle (holder) that will allow one to dispense a pre-allotted portion of powder (or soap, etc.) into their hand by either (1) tapping it with their hand, (2) incorporating it into a mechanical device that creates an impact that simulates the tap, or (3) a timed motion sensor that creates a minute impact for dispensing the powder after detecting motion (i.e., the presence of a hand). The last-mentioned device will allow hands-free operation so as to further minimize the possibilities of migratory infestation of bacteria in both public and private environments and applications. Such environments, to name a few, are hotels, hospitals, home use, airport bathrooms, airplanes, office bathrooms, and medical offices.

The canister or cartridge module can either be filled with the desired powder and sealed in a manufacturing plant and sold through many venues. This offers a huge replacement market for both the home, as well as the institutional market place. It is also possible that a dispenser can be given free with a six-pack of cartridge modules, or individual modules can also be sold separately for subsequent sales. Further, different size

dispensers can be developed to cater to different markets. For example, a baby powder and diaper pail application might consist of a two-three ounce self contained module cartridge, which might last a month before replacing, while institutional modules might be twice, or three times that size due to increased traffic or use.

It is also possible to allow re-loading of powders into a special re-usable module. However, this is less practical financially, unless one can provide replacement boxed powders that one can funnel into a re-useable canister module.

A highly concentrated deodorizing module might not require the release of a powder, but may simply have an open aperture which is opened enough so as to release the deodorizing material to neutralize the odor. A release of powder appears to have a decided advantage, especially for arresting or neutralizing odorous smells, and minimizing or arresting bacterial and viral agents.

It is also possible that a timed-release device can be provided to release a measured amount of deodorant or disinfectant at timed intervals in certain applications where offensive odors or hazardous contaminants build up.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a view of a trash can (garbage pail) with a hinged lid and with a powder dispenser of the present invention mounted on the inner surface of the hinged lid;

Fig. 2 is an enlarged view of the powder dispenser mounted on the inner surface of a hinged lid;

Fig. 3 is a view of a diaper pail with a powder dispenser of the present invention mounted on the inner surface of the hinged lid thereof;

Fig. 4 is a perspective view of a powder dispenser of the present invention, taken from the bottom;

Fig. 5 is a side view of the powder dispenser of the present invention;

Fig. 6 is a perspective view of the powder dispenser of Figs. 4 and 5, taken from the top;

Fig. 7 is another perspective view of the powder dispenser of Figs. 4-6, but with plugs shown closing the bottom openings thereof;

Fig. 8 is a top view of a diaper disposer container with a clear upper lid, showing a powder dispenser of the present invention mounted on the inner surface of the clear upper lid;

Fig. 9 shows the diaper pail of Fig. 8 with the cover in the open position, showing the powder dispenser of the present invention mounted on said inner surface such that it is removable for easy replacement;

Fig. 10 is an enlarged view of the mounting structure shown in Fig. 9;

Fig. 11 shows a user tapping on the upper surface of the diaper pail to dispense powder from the powder dispenser;

Fig. 12 shows the powder dispenser in the process of being removed from the diaper pail;

Fig. 13 shows a different type of deodorizer mounted on the inside of the waste receiving portion of the diaper pail; and

Fig. 14 shows the diaper pail in the process of being closed such that the "tapping" when the cover securely closes is sufficient to release powder from the powder dispenser.

DETAILED DESCRIPTION

Figs. 1-3 show the powder dispenser cartridge module of the present invention mounted in the inner surface of a trash or diaper disposal can. Referring to Figs. 1 and 2, a powder dispenser 10 of the present invention is mounted on the inner surface of the pivotable lid 2 of a waste can 1. In this embodiment, the powder dispenser 10 may be adhered to the inner surface of the cover 2, for example using an adhesive such as double-sided adhesive tape. Preferably, the adhesive is removable so that the powder dispenser can be removed when the powder therein is exhausted, for replacement by a new powder dispenser. Such a new powder dispenser may come with double-sided adhesive tape on the upper surface thereof for easy adherence to the inner surface of the cover 2 of the trash can.

Fig. 3 shows a similar arrangement where a powder dispenser 10 is mounted to the inner surface of the pivotable cover 3 of a diaper disposal pail 4 or the like. Similarly, adhesive can be

used to mount the powder dispenser 10 to inner surface of the cover 3.

Figs. 4-7 show the powder dispenser in greater detail. The spiral pattern 11 on the powder dispenser is shown merely by way of example for reinforcing the structure. The spiral pattern 11 may or may not be included, as desired.

The powder dispenser includes a bowl-shaped portion 12 and an upper cover portion 14 having an extending lip 16. The upper cover member 14 may include an opening 18 which is used to fill the powder dispenser with the appropriate powder. The opening 18 may then be closed, for example by means of an adhesive tape-like member 20 (shown in broken lines) which is adhered to the outer surface of the cover 14 to close off the opening 18. The adhesive covering 20 can be removable to refill the powder dispenser, as desired.

The bottom portion of the bowl 12 has openings 22, 24, 26 therein for dispensing the powder contained in the powder dispenser. Alternatively, only one or two such openings could be provided, depending upon the nature of the powder being dispensed, and depending upon the amount of powder which is to be dispensed at each operation of the device. For shipping purposes, the openings 22, 24, 26 are closed by plug members 23, 25, 27, as shown in Fig. 7. For use, one or more of the plug members 23, 25, 27 can be pulled out by the user to dispense powder from the powder dispenser.

Fig. 7 shows the powder dispenser containing powder up to a level "L". This level "L" can be changed, depending upon how much powder is desired to be put into the dispenser and/or the nature of the powder and/or other considerations.

In use, the powder dispenser is adhered or otherwise secured to the inner surface of a lid of a trash can, diaper pail or other waste disposal container. The waste pail or the like is opened by opening the upper cover in the normal manner for disposal of waste products. Then, the cover is closed either manually, automatically, or by releasing a foot pedal (see Fig. 1). When the cover 3, 2 impacts the lower portion of the container during closing, this impact is sufficient to dispense a small amount of powder from the powder dispenser. If the powder is a deodorizer, the deodorizer will act to deodorize the waste materials in the pail. If the powder is a disinfectant or material to kill viral and/or bacterial contaminants, a sufficient amount is dispensed by the impact to produce the desired result. The amount of powder dispensed at each operation can be varied by varying the openings in the lower surface of the cartridge module 10, or by varying the amount of impact. If sufficient powder is not dispensed when the cover of the pail impacts the body of the pail, additional powder can be dispensed merely by the user tapping on the top of the pail. Such hand tapping or tapping with an implement is sufficient to release additional powder to produce the desired effect.

Figs. 8-10 show another embodiment of the invention wherein the powder dispenser module 10 is removably mounted to the inside surface of a diaper pail. While a diaper pail is shown, any other type of waste disposal pail, such as a garbage pail, medical or hazardous waste pail, etc. could be used. The lip 16 of the powder dispenser unit is slid under retaining members 30, 32, 34 which have step-like inner surfaces under which lip 16 of the powder dispenser may slide. Sufficient friction can be provided by proper dimensioning of the members 30, 32, 34 to retain the powder dispenser in position. Fig. 11 shows the dispenser from the outside of the clear upper surface of the pivotable top, and clearly shows the mounting of the dispenser by sliding the lip 16 thereof under the retaining members 30, 32, 34. Fig. 11A shows an end view of the retaining member 30, as viewed in the direction of arrow A in Fig. 11, to clearly show the stepped configuration thereof to provide a receiving area for the lip 16 of the powder dispenser. The lip 16 of the powder dispenser is received in area 31 as shown in Fig. 11A.

Fig. 12 shows a user removing the powder dispenser 10 from the pail, after all of the powder therein is exhausted.

Fig. 13 shows a deodorizing member 40 which is removably mounted inside the waste receiving receptacle pr container portion 50 of the trash can, and which is slidably received in a receiving member 42 mounted to the side of the container 50. The receiving member 42 has an L-shaped receptacle opening, similar

to that shown in Fig. 11, for slidably receiving the lip 41 of the deodorizer member 40 therein.

Fig. 14 shows the diaper pail of Figs. 8-12 in the process of being closed by a user. The impact when the cover of the pail 38 impacts the lower portion 39 of the pail is sufficient to dispense a small amount of powder from the powder dispenser 10 into the lower portion of the pail where the waste materials are housed. As mentioned hereinabove, if it is desired to dispense additional powder, the user can merely tap on the top portion of the pail, for example as shown in Fig. 11.

The powder dispenser of the present invention can also be used to dispense powder from a wall-mounted device, such as shown in Fig. 13A. Fig. 13A shows such a wall-mounted device inverted with the powder dispenser facing up. In use, the powder dispenser 20 would be facing down. The wall-mounted device has an operating member 60 which, when pressed by a user, causes an impact to be produced on the upper surface of the dispenser 10, thereby causing powder to be dispensed from the opening at the bottom of dispenser 10. Alternatively, a motion sensor can be used to detect motion, for example of a hand, so that impact will be automatically produced to dispense powder.

In a preferred embodiment, the powder dispenser of the present invention is blow-molded or injection-molded from a plastic material, preferably a transparent plastic material, so that the contents thereof can be easily seen. Any inert material, such as FDA approved plastic materials, could be used.

For example, polyurethane plastic material or other plastic materials which are capable of being blow-molded or injection-molded, can be used. Also, materials from which, for example, plastic soda and other soft drink bottle are made, could be used.

The openings 22, 24, 26 (see Fig. 4) can be any desired size, depending upon the characteristics of the powder material being dispensed. In an example wherein baby powder (baby talcum powder) is used for demonstration purposes, the openings 22, 24, 26 were about 1/32 to 1/16 of an inch. The exact opening size of the dispensing openings 22, 24, 26 will vary, depending upon the nature and characteristics of the powder material being dispensed.

While the invention has been described above with respect to specific apparatus and specific implementations, it should be clear that various modifications and alterations can be made, and various features of one embodiment can be included in other embodiments, within the scope of the present invention.

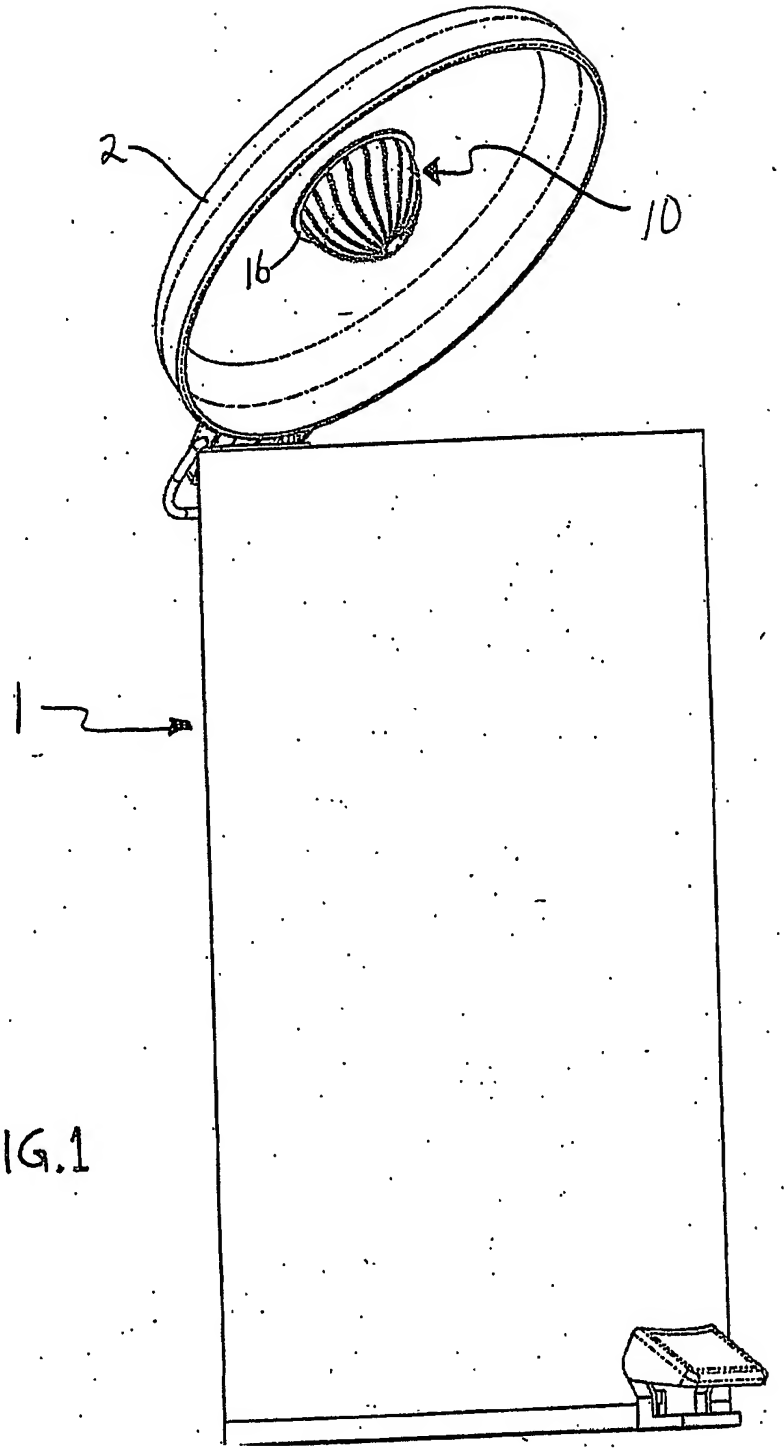

FIG.1

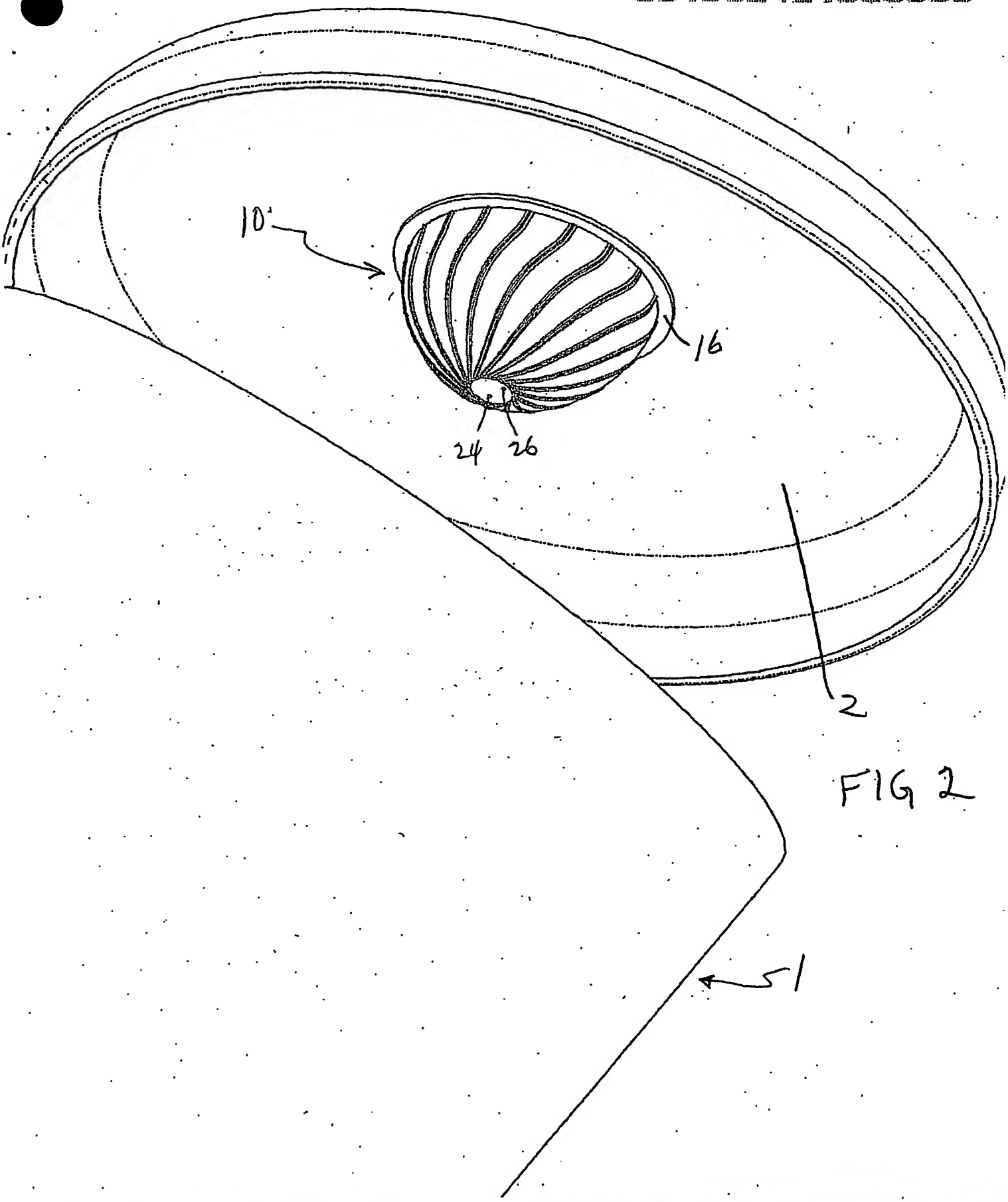

FIG 2

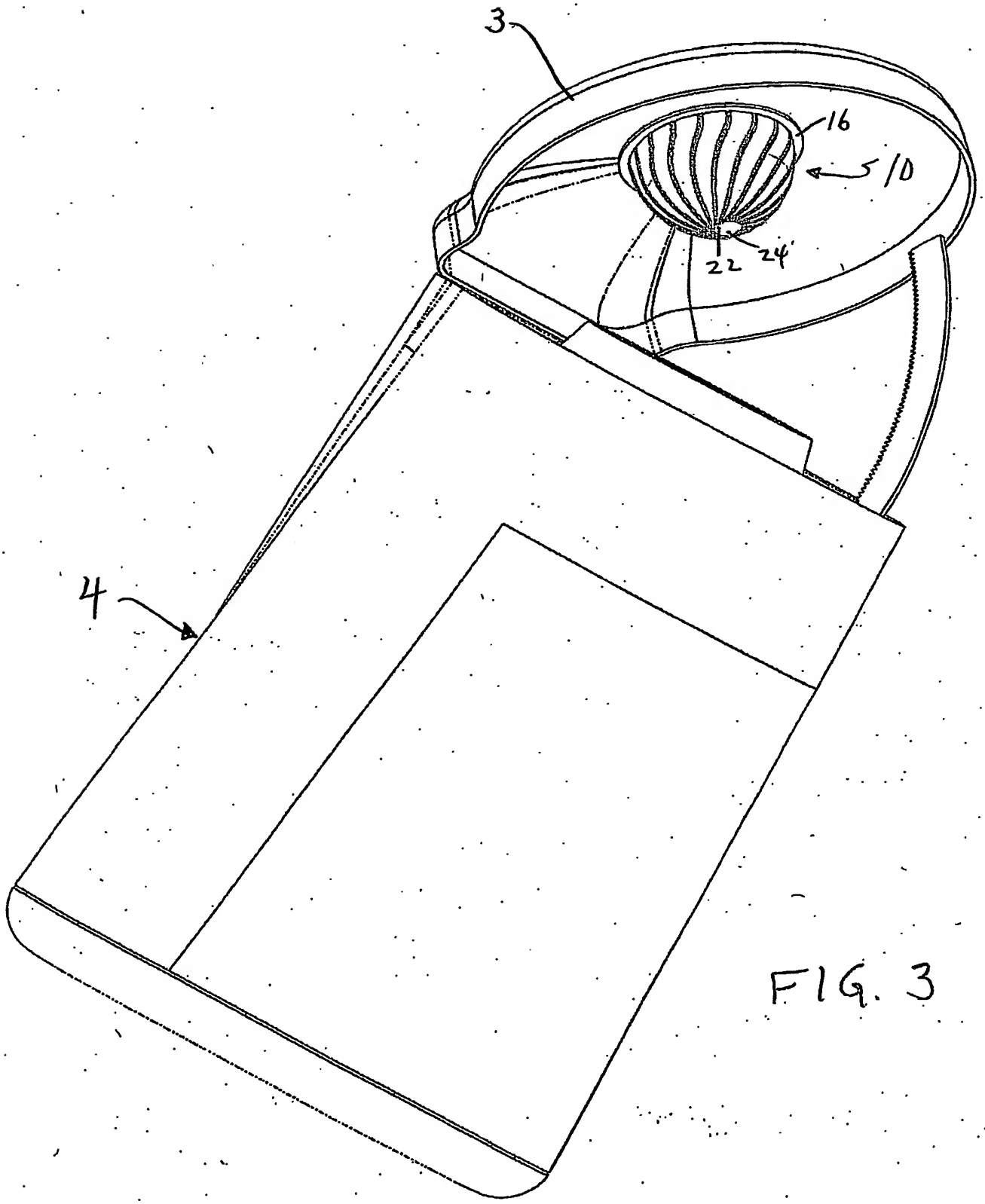

FIG. 3

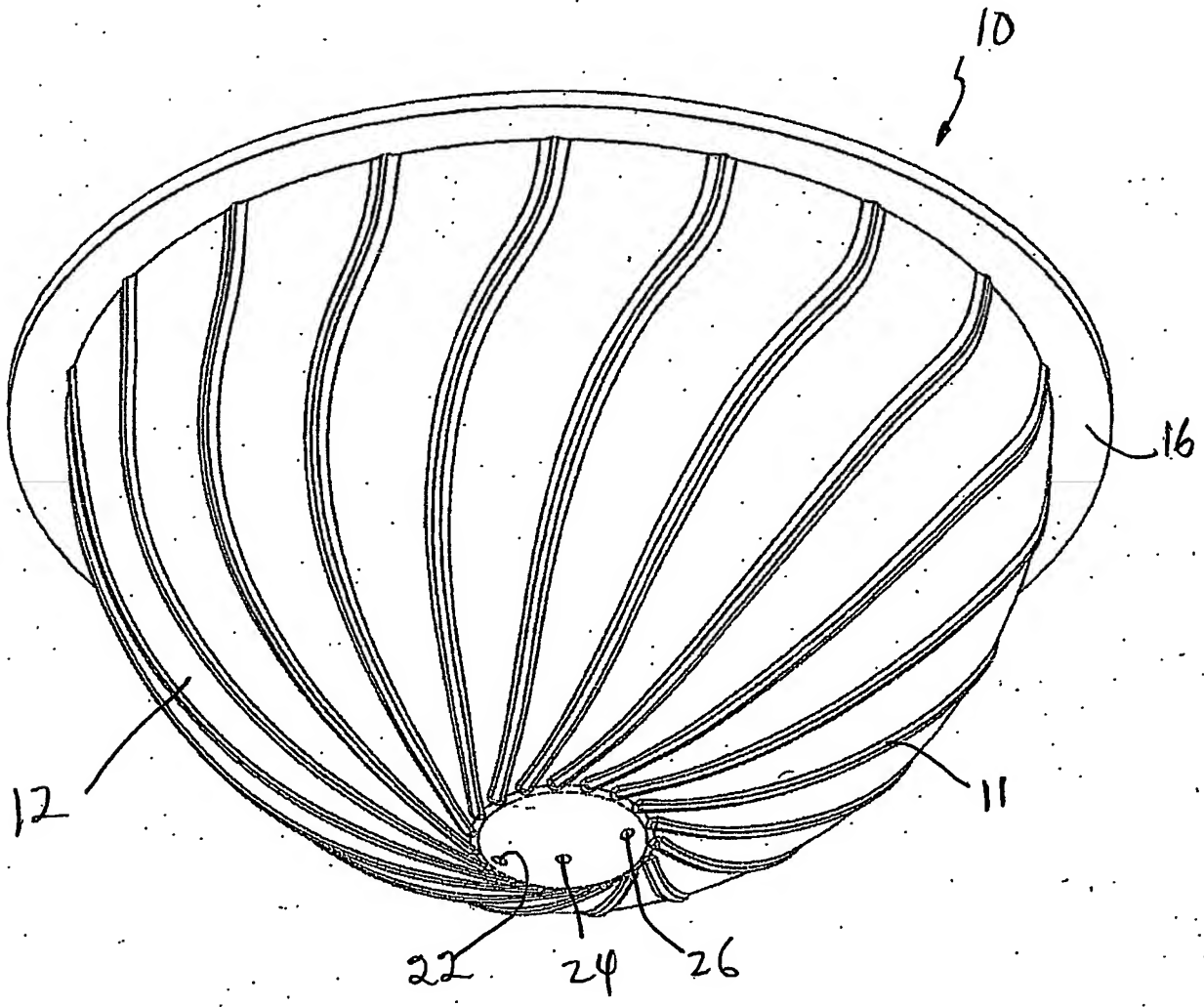

FIG. 4

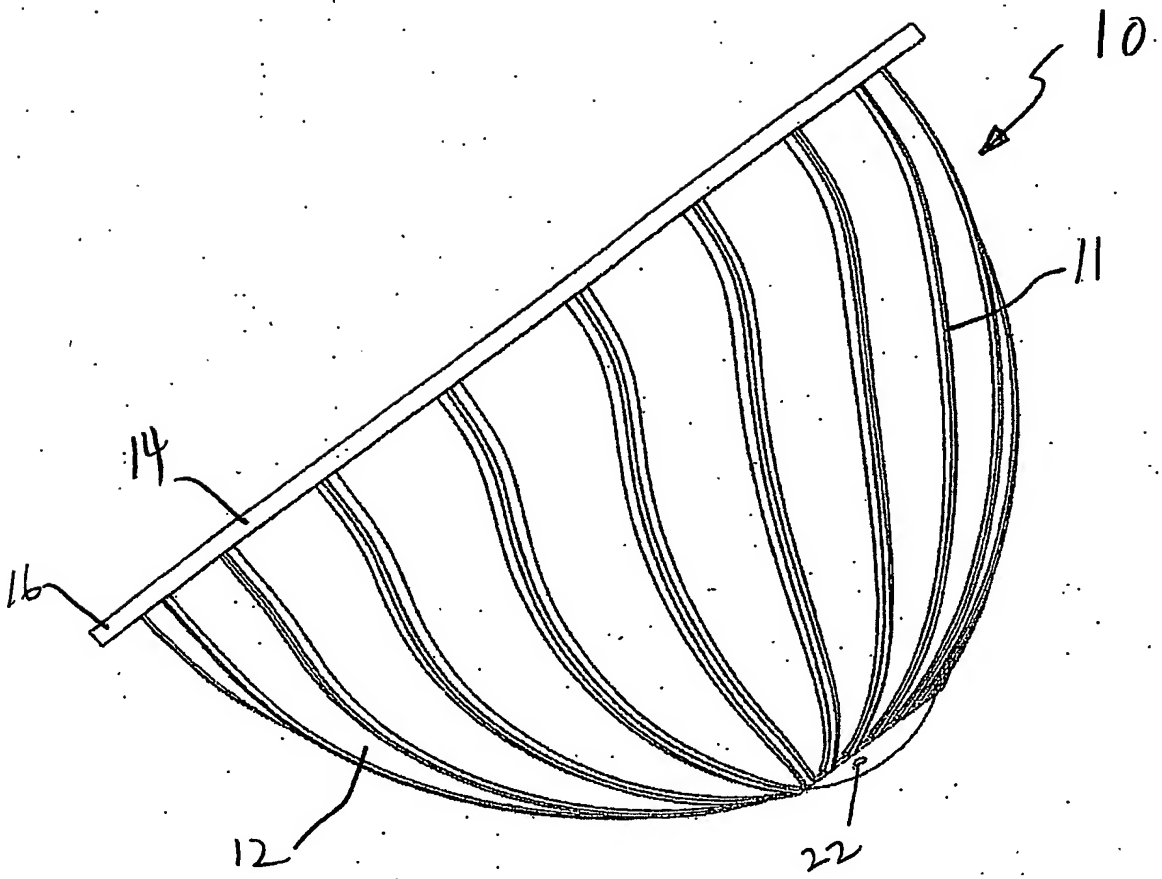

FIG. 5

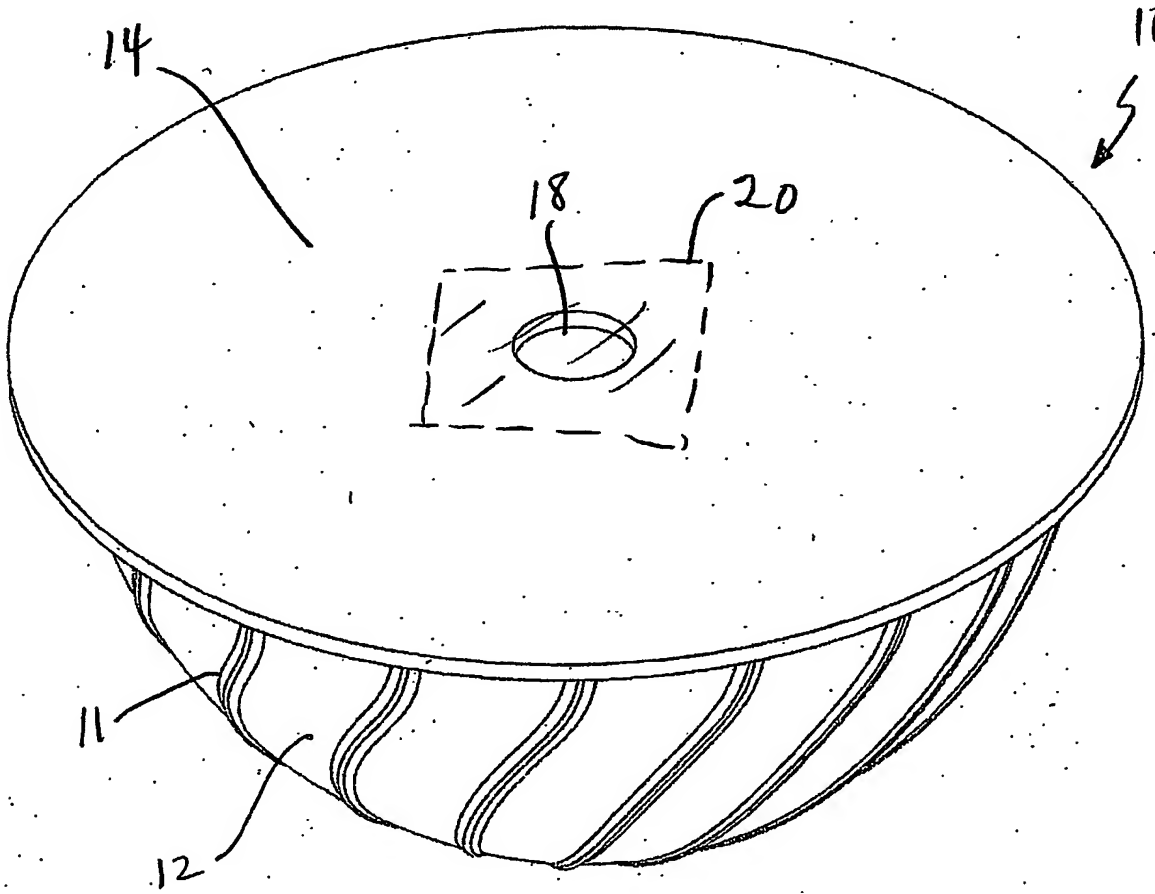

FIG. 6

FIG. 1

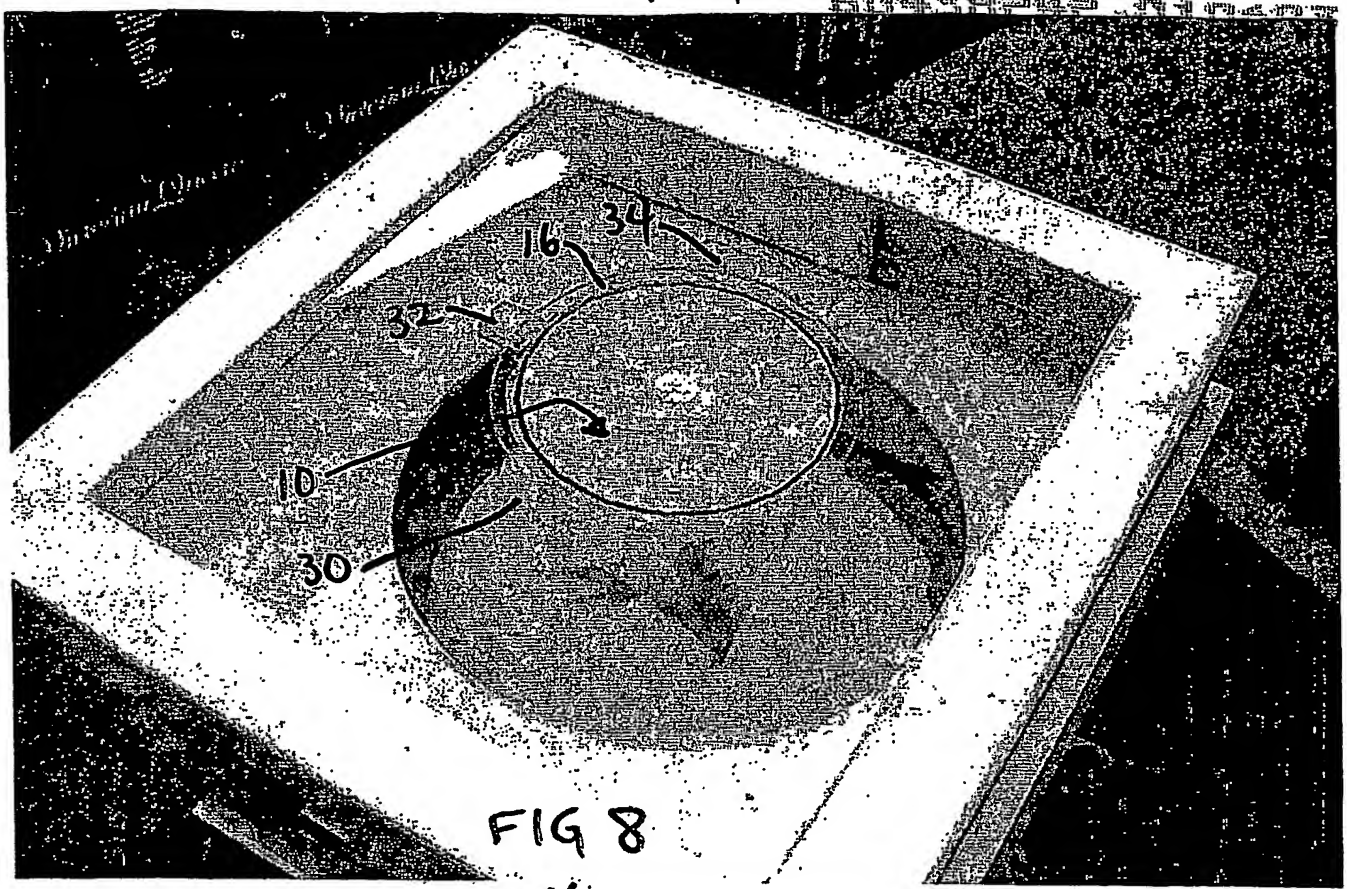

FIG 8

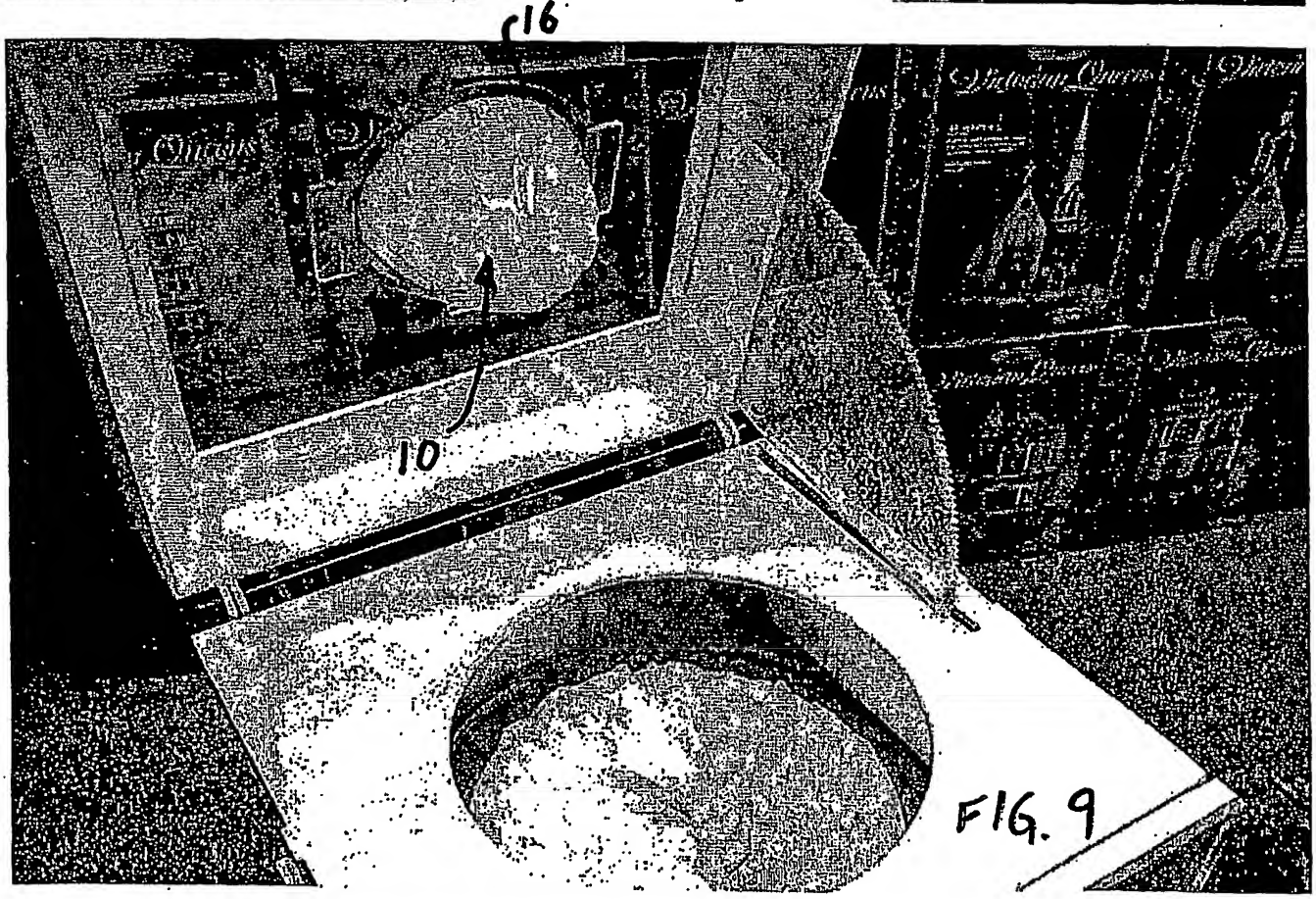

FIG. 9

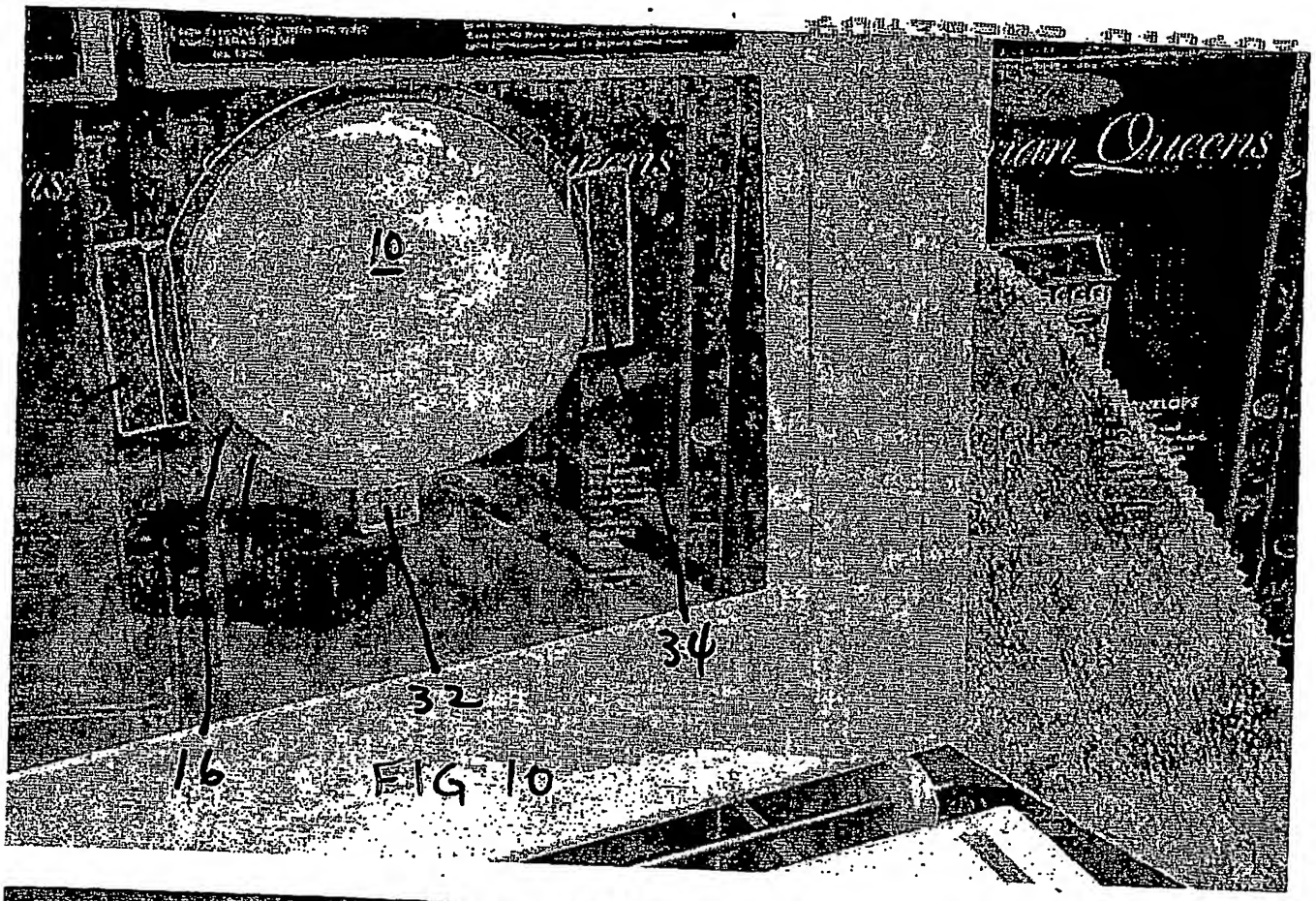

FIG 10

FIG 11

FIG 11A

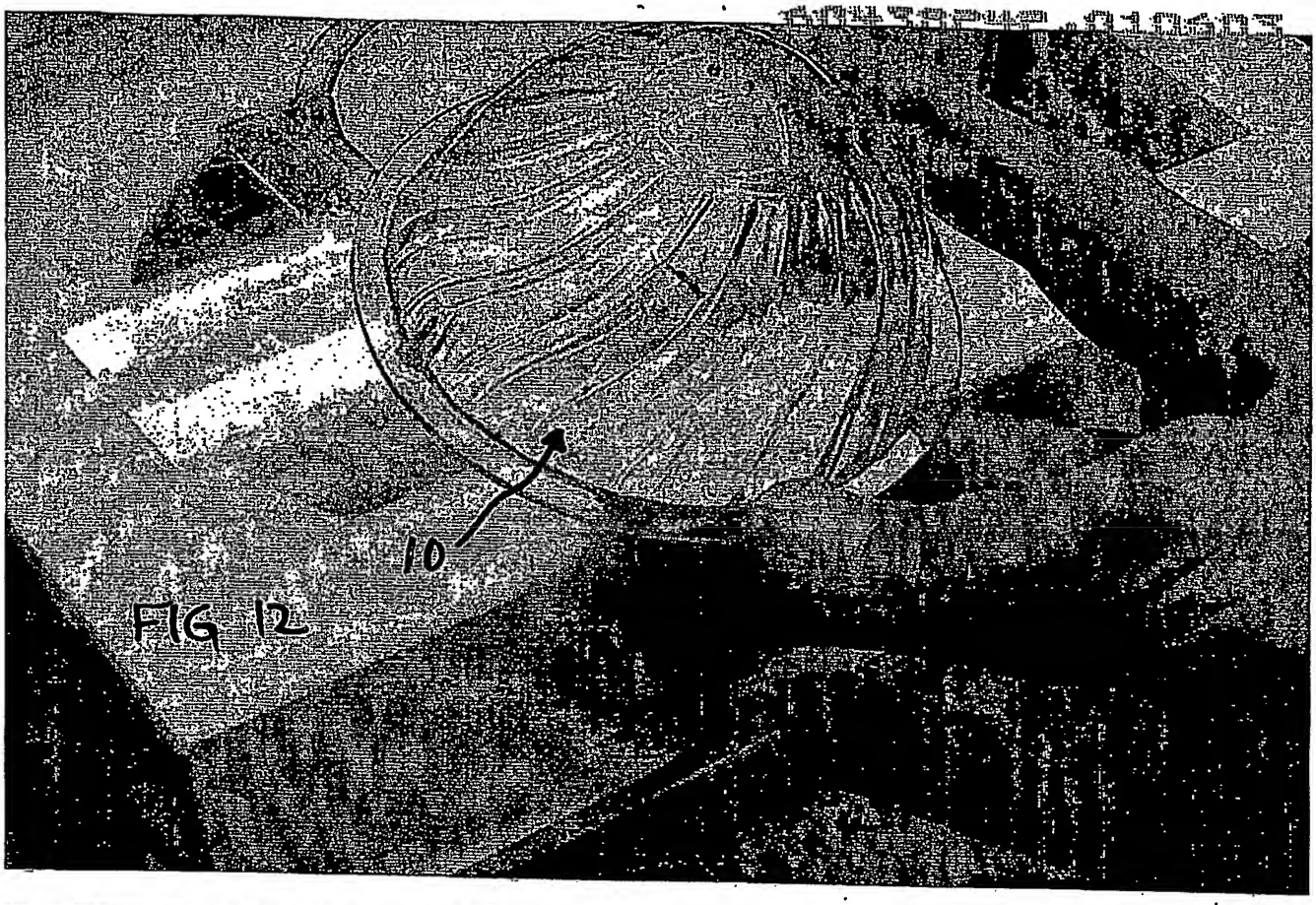

FIG 12

FIG 13

FI
13

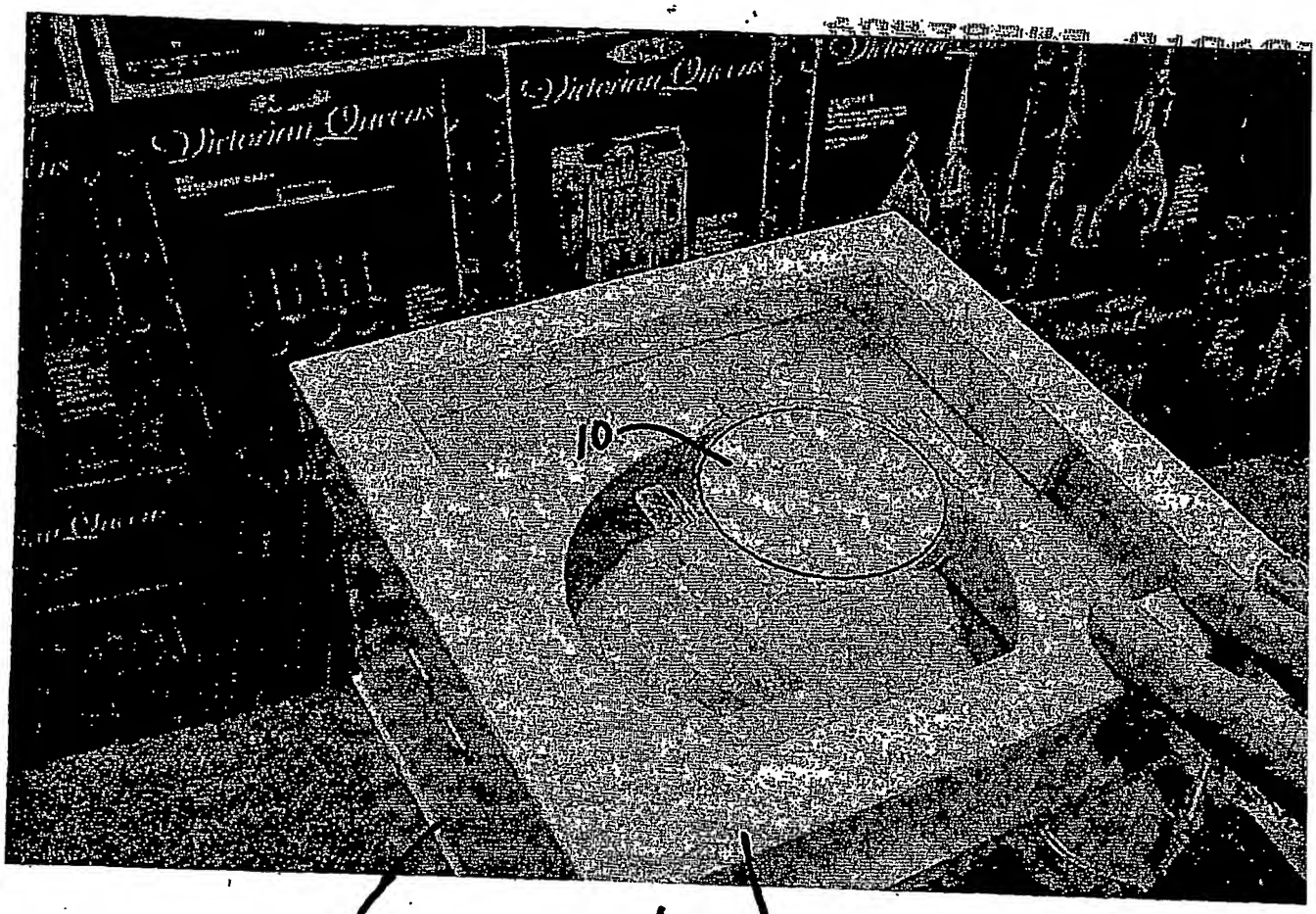

FIG 14

PTO/SB/122 (10-00)

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Examiner Name	
Attorney Docket Number	02762/LH

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[ ] Assignee of record of the entire interest. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

[X] Attorney or Agent of record.

[ ] Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1), Registration Number _____.

Typed or Printed Name	LEONARD HOLTZ, Registration No. 22,974
Signature	
Date	January 6, 2003

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